

Appln. No. 10/591,054
Amd. dated July 21, 2009
Reply to Office Action of March 25, 2009

Amendments to the Abstract

Please replace the previously filed abstract with the new abstract submitted herewith on a separate sheet.

Attachment: Replacement Abstract

REMARKS

The Office Action of March 25, 2009, has been carefully studied. Claims 7-13 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Election/Restrictions

It is noted that the restriction requirement has been made final, and that claims 7-12 have been withdrawn.

Specification

The abstract of the disclosure is objected to because the length exceeds 150 words.

Submitted herewith on a separate sheet is a new abstract of the disclosure.

The disclosure is objected to because sections specifically referencing the claims containing grammatical errors.

The sections specifically referencing the claims have been amended to correct grammatical errors. Additionally, references to specific claims have been deleted.

Claim Objections

Claims 1, 2, 4 and 5 are objected to because of informalities.

Claims 1 and 2 have been cancelled, and claims 4 and 5 have been amended in accordance with the Examiner's helpful suggestions to correct the informalities.

Claim 2 has been rewritten as claim 13.

Rejections under 35 U.S.C. 112

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 2 have been cancelled, so this rejection is now moot with respect to claim 1.

Claim 2 has been rewritten as new claim 13. New claim 13 recites recite "the thermoplastic resins and the other thermoplastic resin" in place of "these." Claim 13 has also been written to change "multilayered" to "plural" thermoplastic resins.

Claims 3-6 have been amended to depend from claim 13.

Claim 4 has been amended to delete "inevitably."

Art Rejections

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wenz, US 4,731,004, which incorporated by reference Corbett, US 3,398,431 and Chisholm, US 3,557,265 in view of Scheibling, US 3,611,492. The Examiner concedes that Wenz does not specifically disclose multiple manifolds or T-die lips.

This rejection is respectfully traversed.

Claims 1 and 2 have been cancelled, so this rejection is moot with respect to claims 1 and 2.

Claim 2, from which claims 3 and 6 depend, has been rewritten as new claim 13 to recite that the other thermoplastic resin is fed to both sides of the plural thermoplastic resins in a feed block, and the melt viscosity of the thermoplastic resins is lower than the melt viscosity of the other thermoplastic resin.

Wenz discloses a process for forming a segmented thermoplastic film with two or more materials side-by-side across the width of the film by a co-extrusion process. One portion of the width of the film is formed by one material, while the remaining portion comprises a second material. The common edges of the materials are co-mingled and joined together to form a single uniform thickness film. Alternatively, the film can be extruded with multiple layers.

In Wenz, the different thermoplastic resins are led to the T-die, which means that they must be led to the T-die in a widened form. In this case, the different thermoplastic resins flow at different speeds and in different directions so that they must remain at a common location for a period of time to be heated at that location. This causes deterioration of the thermoplastic resins because the resins are easily burned at this heating operation, and it is difficult to control the quality and uniformity of the film so formed.

In contrast thereto, the herein claimed method has the various thermoplastic resins meeting in a feed block. This is shown in Figure 6. Because the resins meet in the feed block, there is no requirement for heating the resins together so that there is no possibility that the resins will be overheated.

Although this rejection referred only to claims 1-3 and 6, the Examiner has noted that although Wenz does not specifically disclose the use of thermoplastic resins with specific melt viscosities, the Examiner's position is that any successful layer formation would necessitate the melt viscosities of the resins be within the claimed range.

Claim 5 has been amended to recite that the melt viscosity of the thermoplastic resins is lower than the melt viscosity of the other thermoplastic resin. When the other thermoplastic resin has a higher melt viscosity than the thermoplastics resins, the thermoplastic resins may be made to coexist on both sides of the other thermoplastic resin, whereby pulsation of any of the thermoplastic resins may be inhibited and fluctuations in the width of the film produced are reduced. Accordingly, the intended outstretched film may be formed at a higher speed than other resin films of any of the thermoplastic resins alone or of a plurality of thermoplastic resins. This is described in detail in the specification as filed at paragraph 0018, at page 18.

That is, as described in paragraph 0018, where the melt viscosity difference between the thermoplastic resins and the other thermoplastic resin is controlled to be at most 3000 poise at a shear rate of from 20 to 500 sec⁻¹, and in the case in which the melt viscosity of the thermoplastic resins is greater than the melt viscosity of the other thermoplastic resin, and where any of the thermoplastic resins alone are ejected through the lip of the T-die may pulsate, causing the width of the

formed film to vary. However, when the other thermoplastic resin has a higher melt viscosity than the thermoplastic resins the pulsation of the thermoplastic resins is inhibited and the variations in film width are reduced. This is far more than assuming that successful layer formation would necessitate the viscosities of the thermoplastic resins to be within the herein claimed range.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wenz in view of Pfeiffer, US 5,716,570. The Examiner's position is that it would have been obvious to one of ordinary skill in the art to modify the width of the other thermoplastic resin to act as the disposable edges taught by Pfeiffer.

This rejection is respectfully traversed.

As described in paragraphs 0015 and 0016, when the melt viscosities of the thermoplastic resins is much lower than the melt viscosity of the other thermoplastic resin, there is overlapping and thickening of the film formed, which is undesirable and requires that the thickened parts be removed. In order to eliminate formation of the overlap and thus wasting resins, the melt viscosity differences must be at most 3000 poise at a shear rate of from 20 to 500 sec⁻¹. This is described in detail in paragraph 0017 on page 17 of the specification as filed. Thus, since no overlap is formed in the herein claimed process, there is no formation of disposable edges as in Pfeiffer.

It is noted that the prior art made of record and not relied upon is merely considered to be pertinent to applicant's disclosure.

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In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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